ABSTRACT

BACKGROUND:

Stroke is socioeconomically a disabling disease with an enormous amount of loss to family and the country. The incidence and prevalence of stroke is on a rapid rise with number of risk factors emerging and is in the ascend with the modern living. Stroke is a disease of the elderly and people with risk factors like hypertension, diabetes, dyslipidaemia. The increased serum uric acid and cardiovascular risk factors has been debated for many years and there has been conflicting results over the study of clinical significance of increased serum uric acid in cardio and cerebrovascular diseases. Of it studies have concluded that increased SUA is an important risk factors for the development of CVD with strong association with diabetes mellitus, hypertension, dyslipidaemia, and BMI. Few study have shown that increased SUA has good prognosis with outcome of cerebrovascular disease due to its antioxidant property. Thus this study aims at study the levels of serum uric acid with other risk factors and its role in influencing the risk of incidence of acute ischemic stroke.

AIMS AND OBJECTIVES :

1. To identify the role of serum uric acid in influencing the risk of acute ischaemic stroke.

2. To identify whether any association exists between age, sex, hypertension, diabetes, dyslipidaemia, renal parameters and BMI and serum uric acid level.

METHODOLOGY:

The study was carried out in acute ischemic stroke patients admitted in medical wards under the department of general medicine in Government Vellore medical college and hospital (GVMCH), Vellore. A sample of 100 patients were include in the study after meticulously scrutinising the patients through a well prepared proforma over a period of one year starting from 01 September 2016 to 31 August 2017. After prior Institutional Ethical clearance and obtaining informed consent, the participants satisfying the inclusion criteria were asked detailed history and clinical examination was performed according to the well-designed proforma cited below.

RESULTS:

The mean age of the study subjects was 61.14 years. Most of the patients belonged to the age group 50 -70years. Out of 100 cases, there were 65 (65.0%) males and 35(35.0%) females. The Male to Female sex ratio was 1.85:1. Of the 100 patients 66 had normal BMI and 34 patients had abnormal BMI. Fasting blood sugar was elevated in 50 patients and 50 patients had normal fasting blood sugar. Of the 100 patients 68 patients had history of hypertension, 26 people were smokers.

Overall 69 patients had abnormal lipid profile of which 54 patients had elevated total cholesterol,60 patients had elevated LDL cholesterol,69 had hypertriglyceridemia and 30 had low HDL cholesterol. Clinically 81 patients had elevated systolic bp and 57 patients had elevated diastolic bp. Serum uric acid was elevated in 46 patients in our study with acute ischemic stroke.

CONCLUSION :

Serum Uric acid is an important risk factor for the onset of acute ischemic stroke independent of age, BMI, hypertension, diabetes, dyslipidemia. Of which most significant association was found with BMI, Total cholesterol, Serum triglycerides, LDL Cholesterol, Systolic and Diastolic Blood Pressure.

KEYWORDS:

Acute ischemic stroke, Serum uric acid, Diabetes mellitus, Hypertension, Dyslipidaemia, Antioxidants, Systolic and Diastolic Blood Pressure, BMI.